Taylor Winter

PhD Candidate

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Summary

I am currently studying a PhD at the University of Victoria, Wellington. My research is in health psychology, focusing on the influence of physiological and environmental factors on mood, such as the gut-microbiome and experiences of discrimination. Work has led to a broad range of experience in statistical methods including structural equation modelling, multi-level modelling, and Bayesian methods. As part of my study, I also share my statistical knowledge via means such as a tutorial article on informed Bayesian analysis, and the development of statistical software to make complex techniques more accesible.

I also work with Stats NZ and Ngāi Tahu providing statistical advice and conducting analytics. My specialty is Bayesian modelling and big data. This has led to me developing skill in reproducible workflows and project management techniques which I can bring to an academic role. Example projects include heading the development of an official statistic on poverty and pipeline development for cellphone data from Spark and Vodafone.

Employment

University of Otago	*2019 - Present*
ASSISTANT RESEARCH FELLOW	
Statistics New Zealand	*2019 - Present*
SENIOR DATA SCIENTIST	
Te Runanga o Ngai Tahu	*2018 - Present*
STATISTICIAN	
Statistics New Zealand	*2016 - 2019*
STATISTICAL ANALYST	
University of Otago	*2013 - 2016*
SENIOR RESEARCH ASSISTANT	
Queensland Department of Natural Resources and Mines	*2013 - 2015*
PROJECT OFFICER	
University of Otago	*2012 - 2014*
RESEARCH ASSISTANT	

Education

Victoria University of Wellington	*Wellington*
DOCTOR OF PHILOSOPHY	*Present*
University of Otago	*Dunedin*
MASTER OF SCIENCE	*2016*

Awards and scholarships

2018	IPANZ Young Professional Of The Year (Top 3)	*Institute of Public Administration NZ*
2018	Victoria Doctoral Scholarship	*Victoria University of Wellington*
2015	Otago Research Master's Scholarship	*University of Otago*

Publications

1. Winter, T., Riordan, B., Surace, A., & Jose, P. (n.d.). A tutorial on the use of informative bayesian priors for substance research with minority groups. *Addiction*.

2. Riordan, B., Winter, T., Flett, J., & T. Conner, D. S. P. J. ans. (n.d.). Does the fear of missing out (FoMO) moderate the relationship between social networking use and affect? A daily diary study. *Computers in Human Behavior*.

3.   Winter, T., Conner, T., & Jose, P. (n.d.). Identifying profiles of affective change: An ecological momentary assessment of flourishers. *Emotion*.

4.   Winter, T., Riordan, B., & Surace, A. (2019). The relationship between hazardous alcohol use and discrimination among mÄori in aotearoa new zealand. *Addiction*.

5.   Surace, A., Riordan, B., & Winter, T. (2019). Do new zealand sexual minorities engage in more hazardous drinking than non-sexual minorities? *Drug and Alcohol Review*.

6.   Pittar, N., Winter, T., Falland-Cheung, L., Tong, D., & Waddell, J. N. (2018). Scalp simulation a novel approach to site-specific biomechanical modeling of the skin. *Journal of the Mechanical Behavior of Biomedical Materials*, *77*, 308–313. `https://doi.org/10.1016/j.jmbbm.2017.09.024`

7.   Falland-Cheung, L., Waddell, J. N., Lazarjan, M. S., Jermy, M. C., Winter, T., Tong, D., & Brunton, P. A. (2017). Use of agar/glycerol and agar/glycerol/water as a translucent brain simulant for ballistic testing. *Journal of the Mechanical Behavior of Biomedical Materials*, *65*, 665–671. `https://doi.org/10.1016/j.jmbbm.2016.09.034`

8.   Franz, E. A., Fu, Y., Moore, M., Winter, T., Mayne, T., Debnath, R., & Stringer, C. (2016). Fooling the brain by mirroring the hand: Brain correlates of the perceptual capture of limb ownership. *Restorative Neurology and Neuroscience*, *34*(5), 721–732.

9.   Tong, D. C., Winter, T. J., Jin, J., Bennett, A. C., & Waddell, J. N. (2015). Quantification of subconcussive impact forces to the head using a forensic model. *Journal of Clinical Neuroscience*, *22*(4), 747–751. `https://doi.org/10.1016/j.jocn.2014.11.018`

10.   Winter, T. J., & Franz, E. A. (2014). Implication of the anterior commissure in the allocation of attention to action. *Frontiers in Psychology*, *5*. `https://doi.org/10.3389/fpsyg.2014.00432`

Presentations and posters

Using overseas surveys to produce reliable models of sexual minorities   *2019*

New Zealand Population Conference, Wellington

Alcohol use disparities among gender and sexual minorities in New Zealand (Poster)   *2019*

Collaborative Perspectives on Addiction, Rhode Island

Iwi data tool using integrated data and R Shiny   *2017*

Iwi Data Conference, Christchurch

Using data to support a collective impact model of Maori potential   *2016*

Population Association of New Zealand Conference, Christchurch

The effect of motherhood on income   *2016*

New Zealand Association of Economists conference, Wellington

A machine learning approach to classifying life course outcomes   *2016*

Longitudinal and multivariate analysis network (Stats NZ), Wellington

Methodology for comparing incomes between parents and non-parents   *2016*

Statistical methods seiminar (Stats NZ), Wellington

Inter-hemispheric inhibition in the autistic brain   *2014*

Neuroethics seminar, Dunedin

Skills

- Health psychology research
- Research design and analysis
- Structural equation modelling and causal analysis
- Bayesian statistics and multi-level modelling
- Machine learning techniques such as random forests and neural nets
- Teaching reproducible research practices and statistics
- Knowledge of Tikanga Māori